AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A pharmaceutical composition for regulating bone-forming activity in a mammal comprising ~~at least one of (i) a secreted frizzled related protein (sFRP) or regulating portion thereof (ii)~~ an antibody against a secreted frizzled related protein-1 (sFRP-1) of SEQ ID NO:2, ~~such proteins or portions thereof,~~

~~(iii) a nucleic acid that encodes for either (i) or (ii); (iv) an sFRP antisense nucleic acid; (v) an sFRP siRNA nucleic acid; (vi) an sFRP shRNA nucleic acid; or (vii) a small molecule that has an effect on any of items (i) - (vi)~~.

2. (Currently amended) A pharmaceutical composition according to claim 1, wherein the sFRP-1 is from human osteoblast cells.

3. (Original) A pharmaceutical composition according to claim 1, wherein the bone forming activity is the regulation of bone growth.

4. (Original) A pharmaceutical composition according to claim 1, wherein the bone forming activity is regulation of bone density.

5. (Cancelled)

6. (Original) The pharmaceutical composition of claim 1 wherein the composition comprises an acceptable carrier or diluent.

7. (Withdrawn) A method for treating a bone disorder in a mammal comprising the steps of administering a pharmaceutical composition as in claim 1.

8. (Withdrawn) The method of treating the bone disorder of claim 7, wherein the disorder comprises the group consisting of (a) a bone formation disorder, (b) a bone resorption disorder, and (c) a bone density disorder.

9. (Withdrawn) The method of claim 7 wherein the bone disorder is a degenerative bone disorder.

10. (Withdrawn) The method of claim 9 wherein the degenerative bone disorder is an osteodegeneration disorder.

11. (Withdrawn) The method of claim 10, wherein the osteodegeneration disorder is selected from the group consisting of osteopenia, osteoarthritis, osteoporosis.

12. (Withdrawn) The method of claim 7, wherein the mammal is a human.

13. (Withdrawn) A method for identifying a test compound that regulates sFRP activity, which method comprises determining activity of sFRP incubated in a medium containing a test compound, wherein an increase in activity relative to sFRP alone indicates the compound is an sFRP activator and a decrease in activity indicates the compound is an sFRP inhibitor.

14. (Withdrawn) The method of claim 13 wherein the sample comprises an immortalized human osteoblast cell that expresses a temperature-sensitive mutant of simian virus 40 large T protein antigen, wherein the cell proliferates at about 34° C but does not proliferate at temperatures exceeding about 37°C, when the T-antigen mutant is inactive.

15. (Withdrawn) The method of claim 14 wherein the immortalized human osteoblast cell is an hOB-01-C1-PS-09 cell, as deposited with American Type Culture Collection in Manassas, VA with the designation PTA-785, or progeny thereof.

16. (Withdrawn) A method of modulating Wnt-mediated signaling in a cell comprising contacting the cell with the composition of claim 1, wherein the Wnt activity is regulated.

17. (Withdrawn) The method of claim 16, wherein the sFRP of the composition is sFRP-1.

18. (Withdrawn) A method of facilitating bone formation or repair in a bone cell, comprising introducing a recombinant construct expressing an antisense, siRNA, shRNA sequence to a nucleotide sequence that encodes an sFRP-1 into bone cells.

19. (Withdrawn) A method of diagnosing a bone disease or disorder, the method comprising using a polynucleotide probe capable of hybridizing with the polynucleotide having the nucleic acid

sequence set forth in SEQ ID NO: 1 to detect the presence or absence of an sFRP in a sample derived from a mammalian host.

20. (Currently amended) A pharmaceutical composition for regulating bone-forming activity in a mammal comprising at least one antibody to a secreted frizzled related protein-1 (sFRP-1) of SEQ ID NO:2, or regulating portion thereof.

21. (Original) The pharmaceutical composition of claim 20 wherein the composition comprises an acceptable carrier or diluent.

22. (Currently amended) The pharmaceutical composition of claim 20 wherein the antibody is raised against at least 8 consecutive amino acids of an sFRP-1 protein of SEQ ID NO:2.

23. (Currently amended) The pharmaceutical composition of claim 20 wherein the antibody is raised against at least 10 consecutive amino acids of an sFRP-1 protein of SEQ ID NO:2.

24. (Currently amended) The pharmaceutical composition of claim 20 wherein the antibody is raised against at least amino acids 217-231 of an sFRP-1 protein of SEQ ID NO: 2.

25. (Currently amended) The pharmaceutical composition as in claim 1, wherein the sFRP-1 protein has the amino acid sequence obtained by the expression of the polynucleotide sequence set forth in SEQ ID NO: 1.

26. (Withdrawn) A method for identifying a test compound that modulates sFRP activity, which method comprises comparing the phenotypic changes induced by the test compound on a sFRP +/+ animal with the phenotypic changes induced by the test compound on a sFRP -/- animal, wherein a phenotypic change in the sFRP +/+ animal relative to the sFRP -/- animal indicates the compound is a modulator of sFRP activity.

27. (Withdrawn) An immortalized human osteoblast (hOB) cell that expresses a temperature-sensitive mutant of simian virus 40 large T protein antigen, wherein the cell proliferates at about 34 °C but does not proliferate at temperatures exceeding about 37 °C, when the T-antigen mutant is inactive.

28. (Withdrawn) An hOB cell of claim 27 that expresses a nucleotide sequence encoding a polynucleotide that encodes an sFRP or fragment thereof.

29. (Withdrawn) An hOB cell of claim 27 wherein the hOB is an hOB-01-C1-PS-09 cell, as deposited with American Type Culture Collection in Manassas, VA with the designation PTA-785, or progeny thereof.

30. (Withdrawn) A homogenous population of cells comprising the hOB cell of claim 27.

31. (Withdrawn) A method for preventing a bone disorder in a mammal, which method comprises administering a pharmaceutical composition as in claim 1.

32. (Withdrawn) The method of preventing a bone disorder according to claim 31, in which the disorder is a bone formation disorder, a bone resorption disorder or a bone density disorder.

33. (Withdrawn) The method according to claim 31 in which the disorder is a degenerative bone disorder.

34. (Withdrawn) The method according to claim 33 in which the degenerative bone disorder is an osteodegeneration disorders.

35. (Withdrawn) The method according to claim 34 in which the osteodegeneration disorder selected from the group consisting of osteopenia, osteoarthritis, and osteoporosis.

36. (Withdrawn) The method according to claim 35 in which the disorder is Type II osteoporosis.

37. (Withdrawn) A method according to claim 31 in which the mammal is a human.

38. (Withdrawn) A method according to claim 31 in which the pharmaceutical composition inhibits expression or activity of the sFRP in the mammal.

39. (Withdrawn) A method according to claim 38 in which the sFRP expression or activity is inhibited by at least 20%.

40. (Withdrawn) A method according to claim 38 in which the sFRP expression or activity is completely eliminated in the mammal.

41. (Withdrawn) A method according to claim 7 in which the pharmaceutical composition inhibits expression or activity of the sFRP in the mammal.

42. (Withdrawn) A method according to claim 41 in which the sFRP expression or activity is inhibited by at least 20%.

43. (Withdrawn) A method according to claim 41 in which the sFRP expression or activity is completely eliminated in the mammal.